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Monday, June 08, 2009

The collectible premium

In the comments section of yet another economics professor's blog, Devin Finbarr makes some excellent observations regarding the collectible nature of most investment assets, starting with this nice classification:

> There are only three types of goods in an economy:
> 1) goods providing direct utility (a car, tv, chocolate)
> 2) collectibles (a baseball card, diamonds, gold)
> 3) flows (stocks, bonds)

The demand for every investment asset -- stocks, housing, commodities, etc. -- is a function of some combination of these factors. In housing all three demand factors are at work. Every asset that is not just a fixed monetary cash flow has a collectible premium that reflects, when rational, inflation expectations. (n.b. this is technical nomenclature that can have a slightly different meaning than the normal use of the words -- for example I, and presumably Devin, classify the enjoyment one can get from collecting baseball cards or wearing gold jewelry as part of their "utility" rather than their "collectible" nature, the latter being purely a matter of the asset's perceived or actual function as a store of value or medium of exchange).

It is often very difficult to guess what the factors of demand coming from direct consumption utility are (for example, is the sunny yet cool California coast and the wealthy and smart neighbors it attracts worth paying five times as much or is the coastal California price premium, as Devin suggests, primarily a collectible premium?). Sometimes it's also difficult to estimate cash flow. Thus it's often hard to estimate the collectible premium. Also, since the collectible (or inflation expectations) premium is little recognized, a wide variety of bogus explanations are often used to explain price movements that are actually due to changing inflation expectations: the most popular being dubious theories of changes in supply (e.g. "peak oil") or consumption demand, since demand for assets as inflation hedges is very under-recognized. Also common are theories that impute price changes due to changes in inflation expectations to purely irrational psychology, "technical", or "trend" factors based on the history of the price itself. (The history of housing prices from 1940 to 2005 made houses look like a lucrative and low-risk investment, for example).

Devin describes inflation expectations as causing a hunt for stores of value in which packs of investors irrationally change their focus from one market to another, causes bubbles and bursts. Since the collectible premium is often so hard to estimate, and is so little recognized, and so many investors do despite those warnings you hear invest based solely on past price history, I don't substantially disagree with this:

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> A stock market is in disequilibrium when people start trading stocks as collectibles rather than as flows. In other words, instead of buying a stock based on the hope of generating a return via dividends, they start buying a stock in order to sell it to someone else (price appreciation)....
>
> When the government dilutes the money supply, people start searching for a replacement collectible to serve as a store of value. People end up buying stocks not based on dividend yields, but in order to trade for later at a higher dollar price. People buy houses not based on direct utility or as an alternative to paying rent, but in order to sell for later at a higher price. These goods start trading as collectibles, and thus are subject to the whims of the herd.

In short, if long-term inflation expectations were zero, the prices of housing, stocks, commodities, etc. could be estimated from demand deriving solely from their cash flow plus consumption demand -- there would be no collectible premium. But since asset prices come with a difficult to estimate and fluctuating inflation expectations premium, this makes it far harder to judge whether an asset is over- or under-priced, leading to greater over- and under-pricing, i.e. seemingly irrational asset booms and busts.

A couple of caveats:

(1) It's important to observe in the context of stocks that their cash flows can come from share buybacks and takeovers as well as dividends, so even with zero inflation expectations people would rationally invest partly for expected price rises in addition to dividends.

(2) There are a number of other sources of high uncertainty in asset markets, e.g. uncertainty over credit conditions, so that bubbles and bursts would not completely go away with zero inflation expectations. However the contribution of changing inflation expectations has, I believe, been the largest factor in most asset price movements since the 1970s.

Bubbles and bursts are based on high degrees of uncertainty about the future far more than on genuine mass irrationality. Of course, things like the Internet bubble seem quite irrational in hindsight, but if you keep in mind what was going on in the late 1990s -- a huge increase in subjective value due to new (to the vast majority of investors) Internet services such as e-mail, Web, search engines, and on-line price quotes -- it was not, without hindsight, terribly irrational to suppose that most of this value would be monetized as profit for the innovating companies. It turned out to be mostly unmonetized -- instead we got most of the foregoing plus shared music, Wikipedia, blogs, and other things of great value for almost free -- so that the Internet bubble collapsed and seems irrational in hindsight.

Bubbles and bursts due to uncertainty over technological innovation will undoubtedly occur again, but the greatest ongoing source of uncertainty in our markets is not regarding technology and monetization of innovation, but rather uncertainties about currencies, credit, globalization, and related political factors, out of which the uncertainty over currencies is usually the greatest.

My takes on last summer's commodity hysteria as it was happening can be found via here.

Devin has put these theories to good use:

> since inflation helps build the bubble, even a small amount of deflation can cause rapid price collapses. The fall in price will be much greater than the fall in dividends. Late last summer I was looking at numbers, and noticed that real estate, equities, oil, and gold had all been down for two months straight. The only thing those goods have in common is the currency they are priced in. So I said, “Holy deflation, Batman!” and sold half of the index funds that I owned.

I congratulate Devin and I do like the strategy suggested here, i.e. arbitrage between asset markets with irrationally different collectible premiums. This strategy does, however, assume that one can estimate the price derived from just supply and cash flow plus consumption demand, at least enough to be able to determine that there is a substantial collectible premium.

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That said, I'd add (perhaps disagreeing with Devin) that in the large collapse in commodities since last summer, decreased expectations for future industrial consumption (due to rising expectations of a long-term worldwide recession) and probably a change in the rationality of the collectible premium of commodities were also major factors alongside the decrease in inflation expectations. Thus gold did not fall nearly as much as the industrial commodities. (It's also possible that this reflects some sort of security premium in a crisis of gold over other commodities, but despite all the gold coin ads to this effect I'm skeptical about that being a large factor). Of course, a change in consumption expectations will also tend to make stocks go down, due to the more direct cause of decreased profits leading to decreased cash flows from dividends etc. Commodities markets reflected informed expectations about future inflation and consumption more quickly than stocks, giving Devin his signal.

Gold and commodities prices have a good long-term correlation across business cycles. Industrial mineral prices do tend to vary more than gold within a business cycle due to changes in consumption expectation. (Of course these are not really predictable "cycles", but unpredictable effects of things like credit conditions, but "business cycle" is the unfortunate standard term in economics for this variation in overall credit and consumption). Another example of the collectible premium arbitrage strategy is to look at the oil/gold price ratio. Last summer this ratio was far too high (in hindsight, although at the time I was skeptical that this unprecedented ratio would last), reflecting a very high valuation of industrial commodities as collectibles. Recently it has much lower, reflecting much lower valuation as collectibles (probably irrationally too low), as well as lowered consumption expectations (the business cycle). In both cases one would have profited over the course of entire business cycle (and even in these two cases, luckily, over the short run) from betting against even more extreme deviations from the average historical ratio (or historical trend -- it's certainly plausible that oil and some other industrial minerals are being depleted faster than gold, or that there are long-term secular difference in their demand functions, but as the recent oil/gold ratio collapse to 1980 levels suggests, the secular depletion/demand gap between oil and gold is probably quite small, and almost certainly less than 2% per year over the long run).

Posted by Nick Szabo at 5:34 PM

25 comments:

nick said...

Here is some additional explanation (from a comment I left on the professor's blog):

Demand curves for housing and commodities have a utility (consumption) component. If a shopper for a house plans to live in it and rent out their basement, the demand curve for purchasing the house also has a cash flow component: the demand for the house includes both utility and flow components. Finally, any asset that provides any hedge against inflation has what we are calling a _collectible_ component. The collectible component reflects inflation expectations. Thus, with non-zero inflation expectations the demand curve for that house includes all three components: utility, flow, and collectible.

Commodities can hedge against long-term inflation and thus often have a high collectible component on top of their consumption component. Houses also often have a high collectible premium. Stocks also have a (smaller) collectible premium.

9:45 PM

Devin Finbarr said...

Glad you found my comment interesting! I loved your paper on collectibles and the origins of money.

A few responses:

This strategy does, however, assume that one can estimate the price derived from just supply and cash flow plus consumption demand, at least enough to be able to determine that there is a substantial collectible premium.

If you know the cash flow, figuring out the price at which you should buy is not too difficult. If bonds of equivalent risk provide better cash flow for the price, buy the bonds. If the expected dividend flows from stocks is better, buy the stocks (you have to take into account that dividends rise over time due to inflation, the dilution rate of the stock index, and the default rates of the bonds).

The difficult part is that the cash flow from stocks varies with monetary inflation. And monetary inflation is very hard to predict. If the Fed had bailed out Lehman, the deflation may have stopped, and the stock market may not have crashed. A lot of people thought that the Fed was going to inflate a lot more than it has. I don't know if there was any way to predict the extent of the current deflation.

Also, if the monetary inflation rate is greater than the interest rate on bonds, then there is no Nash equilibrium price for assets. The best strategy is to buy a collectible in coordination with the herd. In other words, the Nash equilibrium is a currency run.

It's important to observe in the context of stocks that their cash flows can come from share buybacks and takeovers as well as dividends,

In practice, buybacks mostly just cancel out the dilution from issuing options to employees. Also, buybacks are cash flow to people selling their stock. Mark Cuban has a great post on why investors should be wary of stock buybacks.

There are a number of other sources of high uncertainty in asset markets, e.g. uncertainty over credit conditions, so that bubbles and bursts would not completely go away with zero inflation expectations.

In our fractionally reserved world, credit conditions and inflation are close to the same thing.

9:50 PM

Devin Finbarr said...

reflecting a very high valuation of industrial commodities as collectibles. Recently it has much lower, reflecting much lower valuation as collectibles (probably irrationally too low),

One fascinating question is whether houses and commodities can really hold a substantional collectible premium long term. Mencius Moldbug has argued that only a precious metal (gold or silver) can absorb the world's demand for a store of value in the long term.

The basic logic is thus: housing, copper, iron, timber, etc all have higher dilution rates than gold. If the collectible premium gets too high, people build more housing, open up new iron mines, etc. Long term, the collectible premium can never be higher than the cost of production.

If the dilution rate of good X is 2% a year, and the dilution rate of good Y is 5%, then X will appreciate in terms of Y. Rational actors will then invest even more in X. This will cause the price of X to appreciate even more, and investors holding Y will bail while they still can. Since collectible demand is not based on direct utility or cash flow, a collectible investor needs to invest with the herd in order to be assured of a buyer later on. Thus as the herd starts to bail on collectible Y for X, this will create momentum which builds on itself until Y has collapsed back to its price based on utility and/or cash flow.

Since gold and silver have the lowest dilution rate/highest stock to flow of any good in the world, the Nash equilibrium is for them to absorb most of the world's demand for a collectible.

Of course, there are a couple of wild cards. Oil may actually have a lower dilution rate than gold. But there is no direct way to invest in it. I would love for StreetTracks to create an Oil ETF that held actual oil in the ground.

The second wild card is the stock market. Equities have dilution rates as low as gold (as an effect of Sarbox), great tax advantages, lots of marketing dollars backing them, and the support of government policies. In a world where the monetary inflation rate is greater than the interest rate on corporate bonds, but the Fed keeps the inflation rate from going high enough to spark a currency run, equities may hold a substantial collectible premium for a long time.

9:51 PM

nick said...

More good comments, thanks Devin. A few nits and other comments:

If you know the cash flow, figuring out the price at which you should buy is not too difficult.

Mostly true for stocks, but much less true for housing, for which utility/consumption is also an important factor. For commodities instead of a cash flow one somehow has to tease out the utility/consumption factor, which is difficult.

Also, looking at historical cash flows doesn't give you all or perhaps even most of the information needed to predict future cash flows, expectation of which is what the flow demand curve component is based on.

In practice, buybacks mostly just cancel out the dilution from issuing options to employees.

Nevertheless, a better practice is to add up the cash flows. Trim Tabs (no affiliation) keeps good track of non-dividend cash flows. Add in dividends and an appropriate discount rate, and one may be well on the way to calculating a collectible premium for stocks.

In our fractionally reserved world, credit conditions and inflation are close to the same thing.

True.

[Dilution] If the collectible premium gets too high, people build more housing, open up new iron mines, etc.

The same is true for gold. And the _relative_ price compared to other commodities is important, because commodities are often a big input into the extraction of other commodities (e.g. steel prices for ships, pipes, etc. are a big factor in the cost of extracting oil), and labor prices in the long run tend to rise to catch up with commodity prices.

[Due to Long term, the collectible premium can never be higher than the cost of production.

Not true for gold, and not true for other commodities. MM's analysis simply assumed that we must converge on a single store of value and medium of exchange. That's clearly not the case for a store of value and is only true for the medium of exchange where the transaction costs of handling multiple prices and currency exchange are substantial. See my response to the MM article you cited.

If the dilution rate of good X is 2% a year, and the dilution rate of good Y is 5%, then X will appreciate in terms of Y.

But in fact oil has over the long run risen at least as fast or a bit faster than gold.

The differential dilution rate has much to do with storage costs. If it costs about the same to store oil in the ground (by not pumping it) as to store bullion in a warehouse, owners of oil fields can decide not to pump. If one is in a strict zoning area where it's very hard to build new housing, you also get very little dilution. (This could explain the huge premium for coastal real estate).

Some difference may come about via a different mechanism than you suggest, i.e. substitution -- in the case of oil, people substituting other energy sources for oil, for example. Oil has to go pretty high for that to be substantial, though -- we saw some reduction in demand, but not a large reduction, at $140/barrel. Since gold price is dominated by its collectible premium this is presumably less of a problem for gold.

5:47 PM

nick said...

Oil may actually have a lower dilution rate than gold.

Oops, I missed this sentence. I suspect oil's dilution rate is only slightly higher than gold's, and that only at high collectible premiums and due to substitutability of consumption rather than increased production at high collectible premiums. I suspect some other minerals (perhaps copper, iron, natural gas, etc.) also fall in the category of cheap to store unextracted as an inflation hedge, although not as good as oil in this regard because the cost of extracting them is higher. Of course, the cost of extracting gold and silver are also relatively higher than the cost of extracting oil. For the commodities which are more expensive to extract but cheaper to store above ground, the above-ground inventory is far more important than the above-ground inventory of oil.

the cash flow from stocks varies with monetary inflation. And monetary inflation is very hard to predict.

Stocks vary greatly in the degree to which they provide an inflation hedge. In a stagflation economy (e.g. the 1970s), which we seem to be re-entering, the profits on most stocks do not increase to keep up with inflation, and can lag terribly. Most companies do not have enough hard assets to hedge against inflation, they are leveraged to various degrees, their customers may or may not pay the much higher nominal prices they will have to charge to remain profitable, etc. Stock indices in nominal terms ended the 1970s about where they began, but in real terms went down by about a factor of 10, rivalling their collapse in the early years of the Great Depression. This may be happening again.

Equities have dilution rates as low as gold (as an effect of Sarbox), great tax advantages, lots of marketing dollars backing them, and the support of government policies.

I don't understand how you conclude that stocks have low dilution, or what that has to do with Sarbanes-Oxley. That's quite an intriguing comment, though.

My understanding is that the assets and liabilities of companies are so varied in nature and fluid one can't generalize about their ability to hedge inflation, except to note that their overall track record in stagflation, as noted above, is very poor.

Outside of large financial companies, I see very little support from the feds and much negative for shareholders. The feds now care far more about labor unions than shareholders, and only care about a few politically very visible companies like GM and Chrysler. The perceived (at least) screwing of bondholders may be driving up the costs of credit for U.S. corporations and quite possibly has helped to dramatically drive up the costs of U.S. Treasury bonds over the past few weeks.

6:27 PM

Devin Finbarr said...

Mostly true for stocks, but much less true for housing, for which utility/consumption is also an important factor.

You can use the cash flow of an equivalent house that is entirely tenant occupied to compute the price.

Also, looking at historical cash flows doesn't give you all or perhaps even most of the information needed to predict future cash flows, expectation of which is what the flow demand curve component is based on.

True. If you're investing in an index it becomes a bit easier. In general, dividend growth of a broad index should be very roughly equal to monetary inflation (although calculating monetary inflation is not easy at all). But it is possible that long term trends can ruin the correlation (for instance, breakdowns in corporate governance may result in companies to dropping their dividend payout ratio).

Also complicating things is that there is a collectible premium embedded in the price of bonds. Fractional reserve is actual a special

case of the collectible premium (bank notes trade as collectibles, rather than based on the cash flow of the underlying assets)

Nevertheless, a better practice is to add up the cash flows.

Buybacks are not a cash flow to the shareholder. If cash is not flowing into your bank account, it's not cash flow. As an investor, you need to take buybacks into account, but you cannot simply add the buybacks to the dividends to get total discounted cashflow. Imagine you are an endowment holding the stock forever. The stock buyback only means something to you if it results in an increase in your dividend. If you add the amount of the buyback to the expected dividend then you are double counting, and you will find that your books do not balance.

The same is true for gold.

True, although I believe the stocks to flow ratio is the lowest for gold of all commodities (except perhaps oil, if you count oil in the ground as stocks). That's why traditionally it has been the monetary good of choice.

But in fact oil has over the long run risen at least as fast or a bit faster than gold.

If you believe the doomsayers, the dilution rate of oil is actually negative. I'm not sure if this is true, but if there was an equivalent of the GLD ETF for oil, I'd be buying.

10:00 PM

Devin Finbarr said...

MM's analysis simply assumed that we must converge on a single store of value and medium of exchange. That's clearly not the case for a store of value and is only true for the medium of exchange where the transaction costs of handling multiple prices and currency exchange are substantial.

I read the debate between you and Moldbug a while ago. You both seemed to talk by each other a little bit.

Clearly, in the current American economy the collectible premium is spread out among a number of goods - dollars, housing, stocks, gold, etc. But you'll notice that the collectible premium is very, very unstable. Housing prices, stock prices, gold prices are doubling and then halving every few years. The entire system is in a state of disequilibrium.

For the sake of argument, let's estimate that the current aggregate demand for collectibles is spread 25%, 25%, 25%, 25% among dollars, housing, stocks and gold. Moldbug's point is that if the government ran a sound monetary policy, the collectible premium would end up being something more like 90% 3% 3% 3%. Under a sound money policy, the monetary dilution rate of the dollar would be 0%. The dollar has the best tax treatment, guaranteed demand, and denominates all contracts. The combination of the 0% dilution rate and the backing of the government would mean that rational actors would always prefer to invest in dollars as collectibles rather than anything else. Moldbug writes in another post: "As long as the storage cost for this asset is zero and the supply in existence is fixed, you have a perfect Nash equilibrium - using any other asset as a medium of indirect exchange provides no advantage, and runs the risk of buying into a bubble which will subsequently pop as punters revert back to the stable standard."

In our real world of incredibly unsound money policy, there is no Nash equilibrium. Dollars have the best tax treatment, the backing of USG, and they are used to denominate all contracts. But they dilute at a much higher rate than housing, equities and gold, making it a poor store of value. Housing has much better tax treatment, and you can get cheap loans to buy it (from 2003-2008 you could get loans at negative interest rates). Gold has terrible tax treatment and no official backing, but it has a 5,000 year history as being the primary collectible for civilized economies. As result, the collectible premium is spead among these goods. But the distribution is constantly changing and highly unstable.

I think that there is a lot of merit to Moldbug's argument. Under the classical gold standard equities and housing did not have the same kind of collectible premiums they have now.

Another way to phrase the question is this: do you believe that a bimetallic standard is workable? Or would it be hopelessly unstable?

10:02 PM

Devin Finbarr said...

Stocks vary greatly in the degree to which they provide an inflation hedge. In a stagflation economy (e.g. the 1970s), which we seem to be re-entering, the profits on most stocks do not increase to keep up with inflation, and can lag terribly.

Not true. From 1970 to 1980 M2 money supply rose 250% and S&P profits rose 270%. Dividends rose 200% (falling dividend payout ratios is a disturbing trend, IMO).

The stock prices did indeed stagnant. But the cash flow very roughly kept up with inflation. For whatever reason, the collectible premium of stocks fell during the decade. Then it came back with a vengeance in the late 1980's. I think the large collectible premium of non-monetary goods is caused by inflation in general. But the distribution of the collectible premium is very, very hard to predict.

I don't understand how you conclude that stocks have low dilution, or what that has to do with Sarbanes-Oxley. That's quite an intriguing comment, though.

A while ago I actually calculated the dilution rate for the NASDAQ 100 from 2006 to 2007. It came out to -1%. I didn't double check my work, so there could have been a math error. But even if it's a little off, the dilution rate is much lower than the dollar which diluted ~8-12% that year.

If you hold an index, and you are thinking about it from the perspective as a collectible (in which cash flow does not matter), the dilution rate includes the dilution of the stocks comprising the index, plus the losses from stocks falling out of the index and being replaced. Sarbox makes it harder for companies to go public, and thus lowers the rate at which companies comprising indexes like the S&P 500 or the Wilshire 5000 get replaced by new upstarts.

Outside of large financial companies, I see very little support from the feds and much negative for shareholders.

The main government support for stock prices comes from the special tax treatment of 401ks. Let's say that everyone allocates 5% of their income to their 401K and buys S&P index funds. Let's say that the S&P dilutes at 2% a year and the dollar dilutes at 8% a year. Even if the underlying companies redirect all profits back to the unions and pay no dividend, the stock will still appreciate 6% a year in terms of dollars. Its all tax free, which makes it a much better deal than buying gold coins (and most company 401K plans do not allow buying the GLD ETF).

10:32 PM

nick said...

More great comments from Devin, with the great bulk of which I agree, but of course it's more fun to explore differences:

In general, dividend growth of a broad index should be very roughly equal to monetary inflation

Well, _total cash flow_ (including buybacks, sales of new issues, cash takeovers and insider trading as well as dividends) would keep up with inflation _if_ inflation had no negative impact on business. But I suspect there may be quite a bit of negative impact from changes in inflation expectations which revalue long-term contract terms and make planning more difficult (e.g. introducing much greater uncertainty into both the customer and producer sides of the commodities business).

Also, it's very odd that a collectible premium would go down when inflation rises (1970s) and go up when inflation goes down (1980s and 1990s). Assets have a collectible premium because they hedge against inflation, so that the collectible premium goes up when

inflation expectations go up, and indeed that's what we tend to see with other assets. The great variability of earnings return on the S&P 500 is baffling, but I don't think it can be explained by the collectible premium.

I did not know that M2 growth in the 1970s was so amazingly small, given that both CPI and PPI inflation was much higher than that, and the rise most commodity prices was much greater still. I'm not sure static M2 numbers are the definitive figure -- isn't velocity also important?

Implied inflation expectations may be computed from the price of gold, which is the closest to a pure collectible we have. But if you are right that the collectible premium should be much higher for gold than for most commodities, housing, and stocks (I don't agree, more below), gold won't give us the proper collectible premium for other assets.

you cannot simply add the buybacks to the dividends to get total discounted cashflow. Imagine you are an endowment holding the stock forever.

Nobody owns a stock forever, and whenever it is sold it's a huge cash flow for the seller of that stock. 12 years is considered to be a very long average holding time for a mutual fund. In any case, if we are looking a stock market index as a whole, buybacks, cash takeovers, new issues, and insider trading all constitute cash flows that must be counted to have an accurate view of the cash flow of stocks.

The next best thing would be to look at earnings history, as you've done in the comparison above.

2:17 PM

nick said...

I believe the stocks to flow ratio is the lowest for gold of all commodities (except perhaps oil, if you count oil in the ground as stocks).

To some extent we should count below-ground stocks of other minerals too. It depends on the ratio of below-ground to above-ground storage costs and on extraction costs. With stable property rights (broadly speaking, including stable politics where ownership is nationalized), below-ground storage costs can be quite low for a wide variety of minerals.

let's estimate that the current aggregate demand for collectibles is spread 25%, 25%, 25%, 25% among dollars, housing, stocks and gold. Moldbug's point is that if the government ran a sound monetary policy, the collectible premium would end up being something more like 90% 3% 3% 3%.

If we knew for certain that the expected future inflation of the dollar was zero forever, the collectible premium on everything except the dollar, including gold and silver, would fall to zero. Since gold's price is almost all collectible premium, its price would fall to probably less than ten dollars an ounce. As inflation expectations fall towards zero the price of gold thus falls more, not less, than other commodities.

Since we can expect future dollar inflation to be nowhere near zero, it pays to diversify one's investment amongst a diverse portfolio of inflation hedges -- precious metals, commodities, housing, etc. -- diversifying away a wide variety of non-inflation risks while protecting against inflation. If particular collectibles go in and out of fashion, it pays to arbitrage the eventual convergence by heavier weighting in the currently less popular collectibles. If people behaved rationally, there would not be any change from the 25%/25%/etc. starting point -- every asset that fully hedged against inflation would maintain the same collectible premium. (An asset that was a less good hedge against inflation, as I believe is the case with stocks, would of course rationally carry a lower collectible premium, as would an asset with less favorable tax treatment, so there would be divergence for these reasons).

Note that the main collectible function people are seeking here is store of value. If people were seeking an alternative medium of exchange, gold's lower storage and transport costs could make more of a difference and Moldbug's argument would have more weight. But with ETFs that can be readily converted into dollars, the historical advantages of gold's low storage and transport costs disappear: commodity ETFs and their derivatives (e.g. bank notes that could be exchanged for them), if it were legally encouraged instead of

discouraged, would make a great medium of exchange, but being able to readily convert back and forth between ETFs and dollars is good enough for store-of-value purposes.

I quite agree with your comments that different tax treatments are important in helping set different collectible premiums, albeit I wonder if one could extract this as a separate demand component, a tax treatment component.

2:44 PM

nick said...

I wrote: *Also, it's very odd that a collectible premium would go down when inflation rises (1970s) and go up when inflation goes down (1980s and 1990s).*

I just thought of a hypothesis to explain the odd dramatic movement in stock price/earning (PE) ratios with respect to inflation. (See the link to S&P 500 percentage earnings, the inverse of PE ratio, that Devin pointed us to, here). The lower expected inflation, the more the better expected cash flow from stocks weighs against the better protection from inflation provided by housing, commodities, precious metals, and collectibles proper (art, antiques, etc.). So people over sufficiently long periods (e.g. the reaction is far quicker for commodities than for housing) alter their overall portfolios to be much more weighted in stocks and much less weighted in those inflation-protected assets. This gives stocks what we might call an "inverse collectible premium" that decreases as inflation expectations rise and increases as they fall. Thus stock prices don't keep up with inflation even if profits do, and stock prices perform disproportionately better as expected inflation falls towards zero.

3:15 PM

nick said...

I wrote: *stock prices perform disproportionately better as expected inflation falls towards zero.*

I should add that this effect can be swamped in a credit-crunch deflation, where expected profits themselves collapse, more than making up for the higher inverse collectible premium. It works much better when inflation caused by monetary and fiscal policy diminishes, as in the 1980s and 1990s.

Stagflation hits stock prices in both ways -- credit retraction causes profits to decline in real terms while loose monetary and fiscal policy decreases the inverse collectible premium as more assets become invested in housing etc. rather than stocks. We can add to this witch's brew the extra inefficiencies caused by mispriced long-term contracts, which should increase costs of long-term credit and decrease profits. Thus the extremely poor performance, in real terms, of stock prices in the 1970s.

3:30 PM

Devin Finbarr said...

But I suspect there may be quite a bit of negative impact from changes in inflation expectations which revalue long-term contract terms and make planning more difficult (e.g. introducing much greater uncertainty into both the customer and producer sides of the commodities business).

I actually suspect stocks disproportionately benefit from unexpectedly high inflation.

Say a company has $100 million in revenue, $45 million in debt payments, $45million in operational expenses and $10 million in profits.

Let's say there's an unexpected 10% inflation, that's fairly evenly distributed. Revenues will rise to $110 million, expenses to $49.5 million, and debt payments will remain at $45 million. Thus profits will rise by about 15%, greater than the amount of inflation. Inflation hurts those holding the debt tranche of a companies obligations and rewards those holding the variable equity tranche.

On the flip side, equity holders are disproportionately affected by deflation. In the above example a mere 15% deflation would wipe out all profits and render the equity worthless.

I did not know that M2 growth in the 1970s was so amazingly small, given that both CPI and PPI inflation was much higher than that, and the rise most commodity prices was much greater still. I'm not sure static M2 numbers are the definitive figure -- isn't velocity also important?

CPI inflation was at 205% for the decade, less than the growth of M2. Household income also grew about 200% for the decade.

You're right that M2 is not a definitive measure of the supply of money. Velocity (demand for money) is also important. Ideally, someone would construct a price index comprising only goods of a relatively fixed supply (central city real estate, equities, gold, silver, oil, copper, uranium, farmland, old master paintings). This index could be used to judge changes in the supply and demand for money. Or even more ideally, USG would fix its fracking accounting, so there would actually be an accurate measure of the money supply.

4:03 PM

Devin Finbarr said…

Also, it's very odd that a collectible premium would go down when inflation rises (1970s) and go up when inflation goes down (1980s and 1990s).

It is curious. Explaining changes in the collectible premium for a particular collectible is very difficult because pricing is based on herd pyschology.

At the risk of telling a "just so story" of the type that clutters financial news reporting, here is my explanation for why the equity collectible premium fell in the 1970's:

Most people do not understand the theories behind collectibles and inflation. Rather they understand that over time certain goods investments provide a return in dollars. Usually the observation of historical price appreciation is mixed with a myth that explains why it is a good investment. For real estate, the myth was "there not making any more land, you know". For diamonds they myth is "a diamond is forever." For gold, they myth is, "gold has been used as a store of value for thousands of years." For equities the myth is, "you are buying a share of the economy"

In the common understanding, stock prices rise because the "economy is growing". In reality, this is false. It is possible to have a very fast growing economy where stocks do very poorly. For instance, when Craigslist found a cheaper way of providing job advertisements, the economy "grew" (produced more stuff people wanted) but the net effect on public companies like Dice, Monster, or the NY TImes was very negative. Conversely, it's possible to imagine a situation in which public companies have lobbied Congress to block startup creation. The economy may stagnant but public companies and stocks will do fine.

I think the collectible premium for stocks is most prominent during inflationary booms. From 1983 to 2008 M2 grew at about 5.5% a year. While lower than the inflation of the 1970's, that's still a considerable amount. Also during this time there was the perception of economic growth. Thus the myth that you were buying into economy growth took hold. In reality, people were buying into nominal profits buyoed by inflation and a collectible premium. During the 1970's stagflation and "malaise" the myth of buying into economic growth was far less plausible.

The other factor that I think played a major roll was the invention of 401k plans. This has been a source of tremendous additional demand for stocks. It also for a while created a virtuous cycle. The 401K provided a new source of revenue for Wall St. companies. They could then afford to spend more on marketing. This caused people to buy more stocks. This in turn pushes stock prices up more, encouraging more people to get in the action. Collectibles are always momentum plays.

4:03 PM

Devin Finbarr said...

If we knew for certain that the expected future inflation of the dollar was zero forever, the collectible premium on everything except the dollar, including gold and silver, would fall to zero.

We are in a agreement then.

One follow up question. Let's say that a populist uprising elects Ron Paul as President, and he manages to enact his free banking policies. Legal tender laws are abolished, all capital gains taxes eliminated, all taxes on collectibles. Heck, for the sake of argument let's say all taxes get abolished.

Would the market settle on one particular collectible to use as a store of value (say gold) and would this collectible absorb 95+% of the demand for collectibles? Or would the the collectible premium remain spread across various goods (stocks, silver, housing, etc.)?

4:14 PM

nick said...

I stand corrected on 1970s inflation figures. My personal memory is that it was far larger than that. Obviously the numbers have been corrected behind my back some time between then and now. :-) Probably my memory overemphasizes gold, which went from $35 to a peak of over $800 in 1980, and oil, which went from around $3 to a peak of over $40 in 1980. These reflect expectations that inflation would remain high after the 1970s, which didn't pan out (or, if your theory emphasizing irrationality is correct, the sheer over-reputation of gold and oil over stocks based on recent price history). The CPI growth is of course larger if we tack on ten more years. 1965-1985 the CPI grew 338% whereas S&P 500 earnings grew only a bit less, 296%. I must conclude that stock earnings basically kept up with inflation during the main period of recent historical inflation. We are probably starting to run another experiment. :-(

Since irrationality leaves us waving our arms unfalsifiably, I remain, perhaps like a drunk searching for a lost item under the lamp-post, searching for explanations for prices based largely on rationality and high uncertainty.

[A hypo which I'm afraid is extraordinarily utopian: free banking + taxes abolished]

Would the market settle on one particular collectible to use as a store of value (say gold) and would this collectible absorb 95+% of the demand for collectibles? Or would the the collectible premium remain spread across various goods (stocks, silver, housing, etc.)?

To conserve transaction costs for the medium of exchange (especially to minimize the problem of multiple currencies creating multiple prices for the retail customer), markets would probably settle for redemption windows on either gold or a particular commodity basket ETF or some combination of a variety of ETFs. (There may be ways to reduce retail transaction costs sufficiently, and this would incidentally greatly help new entrants in currency markets get established. On this I refer readers to my old article describing a generalized system of financial contract "translation").

In terms of just stores of value, i.e. investments, transaction costs are so low that the value of diversification between different stores of value with different kinds of risks far outweighs the transaction costs of keeping track of these different investments for all but the smallest of investors. Investments would remain diversified. Since long-term inflation expectations would go way down (replaced by the old regime of inflations and deflations which mostly balance out through a business cycle, if free banking remains competitive) the collectible premiums on all investments would go way down, except perhaps (more below) those of the commodity(s) in which the currencies are redeemed. Investment demand would shift towards flow demand and away from collectible demand. Artwork would be put in warehouses to rot and venture capital would boom.

Even if we need one medium of exchange (currency) standard for transaction cost reasons, a single standard does not necessarily mean one store of value with a high collectible premium. If the basket of investments in the standard is sufficiently diverse -- let's say it includes a real estate basket ETF, a stock index ETF, a commodity basket ETF, and a small fraction of precious metals -- the collectible premium in any one of these stores of value would be small (and gold prices would dramatically fall). The ETFs seem to

solve the problem of a clear contractual definition of the basket.

Two other ways we might reduce the collectible premium: (1) as above, reduce medium of exchange transaction costs to the point where many standards can coexist. (2) If for some reasons, e.g. better auditing and less leverage than during the previous free banking era, overall trust rises to the point where redemptions across the entire business cycle greatly fall, the collectible premium for the backing commmodity(s) also could greatly fall.

8:39 PM

Devin Finbarr said...

Obviously the numbers have been corrected behind my back some time between then and now. :-)

I actually thought of this, but the numbers at ShadowStats agree with the official numbers.

[A hypo which I'm afraid is extraordinarily utopian: free banking + taxes abolished]

If we want to make it more realistic, imagine that there has just been a currency run on the dollar. The American Empire collapses. The West breaks apart into hundreds of city states ruled by warlords, corporations, oligarchs, or kings. Fortunately though, the internet and transporation networks still survive. These city states must be settle on some sort of medium of indirect exchange/store of value so they can trade with each other.

Now, I tried to think through this scenario in my head trying to imagine absolutely no transaction costs. But then my head exploded as I tried to figure out how you would define the flow of a stock purely in terms of a basket of assets. So for the moment let's assume some mental transaction costs, especially in defining contracts. There still remain low transaction costs in actual convertability.

In the case of transactions costs, we agreed that the actors would settle on some sort of common currency for contracts. Let's say that a prominent bank (the Szabo Bank) institutes a new ETF. After a considerable marketing effort, the ETF ends up being used as the primary good used in exchange and contracts. Now even if I go to a non-Szabo bank, I must repay them in SzaboShares. When I buy armaments in the international markets on credit, they lend me SzaboShares and I repay in SzaboShares. Stock dividends are issued in SzaboShares.

The question is, would the optimal ETF for a currency be backed by a basket of multiple commodities or by a single commodity (such as gold).

I'm still thinking that a single commodity would be optimal. Before I continue with my argument though, let me ask a clarifying question. Do you envision that the basket would be strictly defined (ie, one share represents 1 gram of gold, 10 grams of silver, and a barrel of oil). Or would the basket have some sort of floating mechanism, whereby the basket components would depend on current market exchange rates? I'm thinking it would have to be former, as otherwise the contracts would be too unreliable. But I wanted to make sure so I can concentrate my argument.

BTW, if you're interested, I responded to your comment on Moldbug's latest post about absolutism. The troll seems to be gone for now, so if you have a chance, I'd love to hear your thoughts.

8:14 PM

nick said...

Devin, I am no longer commenting over there, but I do greatly appreciate the thoughtful comments of yourself, Vladimir, etc. and will respond indirectly here in the future with posts about Roman Law and absolutism, and will happily respond to non-trolling comments at that time.

In your currency scenario, I think many high-power currencies would develop and trade with low transaction costs -- not unlike what is spoken of today informally as using whatever liquid securities one happens to have a lot of (e.g. companies that have a liquid market in their stock) as "currencies" (e.g. to buy other companies). International trade (such as armaments) is still sometimes done on a barter basis. So the transaction cost assumption doesn't hold for sufficiently large transactions, even today, and I expect automated currency exchange, multi-currency accounting, and deregulation would in your scenario make them even lower, so that many medium-sized B2B transactions, but still not most consumer retail, could use a wide variety of alternative currencies. Since these micro-polities would not converge on a single standard right off the bat, businessfolk would get used to a multi-currency world and we'd have huge incentives to develop tech to deal with multiple currencies.

Do you envision that the basket would be strictly defined (ie, one share represents 1 gram of gold, 10 grams of silver, and a barrel of oil). Or would the basket have some sort of floating mechanism, whereby the basket components would depend on current market exchange rates?

The industrial commodity and precious metals portions would be strictly defined, but to diversify further and include REIT and stock index ETFs -- made possible by an electronic redemption window that gives out the ETF securities in exchange for SzaboShares -- those would be defined by the index fund managers, who are presumably independent of SzaboExchange.

A gold standard doesn't diversify risk. Some of the risks are political -- metal detectors have made gold hard to smuggle and thus easy to ban, and there supply risks -- if somebody discovers easy gold undersea or on Mars, or figures out a nuclear scheme to breed gold from some other element, its collectible premium is hosed.

The main advantage of a gold standard is that you can get your hands on actual physical gold which is independent of trust in third parties. But this is moot as long as the ETF funds were functioning -- you could redeem SzaboShares for the ETFs, then barter the ETF shares for gold coins or bullion. If gold sellers were still accepting SzaboShares at normal market values (i.e. you are not trying to dump SzaboShares as part of a general distrust in or a run on my bank), you could just directly exchange your SzaboShares for gold with them. I expect in an environment you describe with no Continent-wide regulator, that on-line brokers will facilitate such barters for reasonable fees.

It's also possible that bit gold will pan out with lower security and scarcity vulnerabilities than gold.

Bottom line -- I believe that if we need to we can largely automate currency exchange and multi-currency accounting incidental to B2B transactions, as well as a variety of large-scale barter exchanges and financial swaps directly from one security to another without an intermediate standard currency. The main standard people will need is (a) to show others their books, and this can be done through software, and (b) for small retail transactions, unless somehow those too can be automated (e.g. you scan a bar code with your IPhone 77, and it displays the price in your favorite currency, and when you swipe your card it debits your account in your favorite currency and credits the store's account in its favorite currency). The big problem is automating so that (a) people don't have to translate prices in their heads and (b) so that the user interface for discovering the price in your favorite currency is minimal.

11:59 AM

Devin Finbarr said...

will respond indirectly here in the future with posts about Roman Law and absolutism, and will happily respond to non-trolling comments at that time.

I look forward to your posts!

In your currency scenario, I think many high-power currencies would develop and trade with low transaction costs -- not unlike what is spoken of today informally as using whatever liquid securities one happens to have a lot of (e.g. companies that have a liquid market in their stock) as "currencies" (e.g. to buy other companies).

Ok, so in the example the American empire has broken apart. The red giant state collapsing back down into a white dwarf. The rump

government continues to dilute its currency at 15% a year. Businesses around the world seach for a new standard for denomiating long term contracts. Shareholder and corporate boards search for a new standard for dividend payments.

A number of competing banks emerge offering their services as currency. The Szabo Bank offers SzaboNotes which are redeemable for a basket of ETFs. For the sake of argument, let's say that one Szabo note is backed by: 1 gram of gold, 10 grams of silver, 1 share of the SPY ETF, one share in the REIT real estate trust, 1 share of a bond index fund, 1 barrel of oil, 1 kilo of copper, and 10m2 of farmland. The Finbarr Bank offers a FinbarrNote backed entirely by gold. JPMorgan creates a commodity backed MorganNote. It is backed by 10 grams of silver, 10 kilos of copper, and 30 kilos of iron. There are also dozens of other banks issuing notes, but each bank usually copies the basket of either the SzaboNote, FinbarrNote or MorganNote.

The questions is: does one of the notes out compete the others? If so, which one?

I don't think transaction costs will be an issue. Let's assume that the technological innovations you mentioned in your comment actually happen.

If there is a winning note, it will be the best store of value. First, people will need to keep stores of the note on hand as buffers so that they can meet contractual obligations even during emergencies. This will be a significant amount of money so people will want to use the best store of value possible Second, people entering contracts will want to denominate the contract in the most stable and unchanging goods available.

I think that the FinbarrNote will clearly out compete MorganNotes as a store of value. As each note starts to attract customers, the demand for the note will start generating a collectible premium in the underlying commodities. As the collectible premium rises production will increase. For something like Iron, production includes finding scrap metal, stripping down junk, Gold has the highest stock to flow ratio of any commodity. Thus its price will hold up much better as it starts to get a collectible premium. Iron can be pulled into stockpiles from a huge number of sources. As a result, FinbarrNotes (and its clones) will start to appreciate relative to MorganNotes and its clones.

People will notice that FinbarrNotes provide a better store of value. Our advertising materials will pick up on this and spread all sorts of FUD about the foolishness of an Iron-backed currency when gold is the ultimate standard in currencies. As more people switch to FinbarrNotes, the collectible premium will fall on the MorganNotes and the price will drop even more. Our FUD advertising will encourage people to get out of MorganNotes while they still can.

MorganNotes do have the diversification benefit. But the diversification benefit is counteracted by the "bubble risk". Basically, with a collectible, you want to buy with the herd. If the herd looks like it is going to lose interest in your collectible, you want to get out, fast.

5:28 PM

Devin Finbarr said...

A more interesting comparison is the FinbarrNote and the SzaboNote. The SzaboNote is far more diversified, so the collectible premium of each component is much smaller. Thus the diversification benefit may outweigh the "bubble bursting" risk. It also comprises goods with very high stock to flow ratios (if you include oil in the ground as stock).

The SzaboNote would still have a substantial collectible premium. Each good in the basket now recieves stockpile demand in addition to its normal demand. If the SzaboNote (and its imitators) won over the market, it would absorb nearly all collectible demand. So if you could add up all world current collectible demand, measure it as a ratio of total world paper wealth, I think you would get the collectible premium of SzaboNote. As a rough, order of magnitude calculation, that would come out to some thing like 30%. Total paper wealth of the U.S. is something like $60 trillion. The amount of that comprised of collectibles (dollars, dollar equivalent such as treasuries and money market funds, plus the remaining collectible premium embedded in housing and gold) amounts to something like $20 trillion. Thus as a rough estimate, the collectible premium embedded in all goods in the SzaboNote basket would be around 30%.

The Szabo note presents other difficulties Someone needs to manage the index and define the terms underwhich new stocks are added. Any stock that is added recieves a huge bounce as it gets the 30% collectible premium. This could present a lot of opportunity for gaming the system. There would have to be a lot of trust in the company that manages the index. Also, since the basket remains fixed no matter what the dividend yield of the index, there could be a possibility of the SzaboNote fund managers being forced to buy into a bubble. Both of these issues are problematic, but I do not think they are show stoppers.

5:29 PM

Devin Finbarr said...

So let's imagine how the battle between FinbarrNotes and SzaboNotes plays out.

Businessmen search out a replacement currency for the American dollar. The SzaboBank and FinbarrBank market agressively. At first, demand flows equally to both notes. As it does, FinbarrNotes start appreciating greatly relative to SzaboNotes. That's because the demand gets concentrated in gold, which then gets a huge collectible premium. SzaboNotes have a smaller collectible premium.

I can then see a few things happening:

scenario a) FinbarrBank ramps up the marketing efforts. We advertise how our notes have outperformed SzaboBank notes. SzaboBank holders start to defect. The price difference grows even bigger. Now SzaboBank holders start to panic and dump their notes for FinbarrNotes. The gold-back FinbarrBank notes absorb all the collectible premium. Once FinbarrBank has the entire collectible premium, it is hard to dislodge. Since contracts are denoted in it, which creates an ongoing, guaranteed demand.

scenario b) Szabo bank spreads paranoia that people have just bought into a huge gold bubble. Finbarr customers dump the notes for SzaboNotes. Gold prices fall, and more sell off to buy the Szabo notes.

scenario c) The market simply polarizes. Some prefer the safety of gold and buy into Finbarr marketing campaigns. Certain swaths of the economy use Finbarr notes for contracts. Other swaths buy into Szabo marketing and use Szabo notes for contracts. Once great numbers of contracts are denominated in Finbarr notes or Szabo notes there is now a guaranteed baseline of demand for both currencies. The economy stabilizes with both currencies thriving.

I think scenario C only happens if the Finbarr notes and the Szabo notes dominate separated regions. Otherwise there is too much incentive to denominate your contracts the same way that everyone else is doing it. So only a small momentum shift towards Finbarr or Szabo will snowball and there will only be one winner.

Overall, as I play the scenarios out in my head, I think that the situation is simply unpredictable. There are multiple equilibria. The end result probably depends a lot on the initial conditions and the particulars of the situation. If for instance SzaboBank has a much better marketing team, that alone might be enough for it to win.

5:30 PM

nick said...

If the SzaboNote (and its imitators) won over the market, it would absorb nearly all collectible demand. So if you could add up all world current collectible demand, measure it as a ratio of total world paper wealth, I think you would get the collectible premium of SzaboNote.

If we include in collectible demand the demand as a store of value, i.e. an investment, the SzaboNote will take up only a small, and perhaps extremely small, fraction of that demand.

Nobody has a perfect credit rating, not even my bank. There will still be plenty of other investments that are better than holding my currency (indeed, my basket is not optimized as an investment for a particular investor, it is optimized as a very low-risk and liquid investments. Particular investors will want to hold something else when they don't need SzaboNotes). Since transaction costs are zero

(except here for the risks of bank failure) I include with that assumption that SzaboNotes or any other currency need only be held an infinitesimal amount of time. All other times, people hold their standard investment portfolio and (since transaction costs are zero) get SzaboBucks only in the instant they are needed to complete a payment. (A subset of investments, of course, are debts denominated in SzaboNotes, but I don't think that automatically translates into a collectible premium for SzaboNotes if they are only held for an instant).

(We are probably defining transaction costs very differently -- my definition seems to be much broader than yours, see next note. This technical term in economics is admittedly rather misleading -- it includes far more than just costs analogous to broker's fees -- it includes things like risks, costs of obtaining information, etc. -- it basically includes every kind of cost that is not otherwise explicitly broken out -- I think our discussion would benefit from discovering our cost assumptions and breaking them out).

Thus, if SzaboNotes need be held only an instantaneous period of time, in themselves they don't need any collectible premium at all. (In reality, the only collectible premium is that generated from my bank investing its reserves in the basket). It is only debt denominated in SzaboNotes that has collectible value based in part on the credibility of that currency.

Under purely zero transaction costs (and here we admittedly get even more silly, but zero transaction cost assumptions often have that effect) SzaboBank is so reliable that it doesn't need to hold significant reserves, so that the collectible premium generated by its operations is zero.

The Szabo note presents other difficulties Someone needs to manage the index and define the terms underwhich new stocks are added. Any stock that is added recieves a huge bounce as it gets the 30% collectible premium

I suspect the collectible premium will be much lower (and at the imaginary level of zero transaction costs, under my broad definition of that phrase, it is zero).

9:45 PM

nick said...

Your FinbarrNotes (just gold) vs. SzaboNotes (basket) analysis is very interesting. You have to create a "bubble that never pops". Even after you've driven me out of business, if the gold bubble ever pops, or even when it just loses that initial gold-beats-the-basket prestige whereby it initially gained the monopoly, you've created new opportunities for entry into the market. Especially if consumer's mental transaction costs are zero so that consumers don't at all mind switching from one currency to another. Also, under the zero transaction cost assumption the fact that contracts are denominated in your currency doesn't give you any lock-in advantage, as it's costless to exchange currencies and to translate book entries from one currency to another for accounting purposes. (Indeed, under zero transaction costs why denominate contracts in a currency at all? Just denominate them in terms of the ETF basket or weight of gold itself, and when the time comes pay by purchasing and transferring the ETFs, and cut out the middleman. Indeed, in a perfectly zero transaction cost world barter is costless and there is no need for a currency).

Since zero transaction costs across the board bring zany results, I don't think there's any way to get away from looking at specific kinds of transaction costs, such as

(1) the risks and benefits of fractional reserve banking and maturity/duration transformation -- the lower the reserves and the greater the duration mismatch the lower of a collectible premium it generates on the basket investments of the reserves, but the greater the risk of bank failure. ("Duration" BTW is more general term than "maturity" and includes things like a weighted average of maturities, e.g. of a bond with coupons).

(2) the speed and costs of switching from holding currency to investment and vice versa, and of exchanging currencies (under zero transaction costs here one holds a currency only for an infinitesimal period of time, just long enough to liquidate an investment, then make a payment with the proceeds, then for the payee to invest the proceeds -- it all happens in an instant and costlessly).

(3) the mental transaction and accounting costs of using multiple currencies.

n.b. without transaction costs of the (2) or (3) kind there is no lock-in effect from having prices quoted in or long-term contracts denominated in a particular currency, and thus there are no barriers to entering the currency-issuing market with a new standard.

(4) taxation costs and other political costs and risks.

I'm using the broad economists' definition of "transaction costs" (which admittedly can be misleading because it includes costs that aren't terribly analogous to broker's fees, but rather have to do with risks, the cost of information, etc.) and thus under the no transaction costs assumption all these costs (1)-(4) would be zero. There would be no lock-in, no barrier to entry in the currency market. I suspect you are not looking at many of these costs as zero in your assumption of zero transaction costs. Probably we should enumerate what we believe the substantial costs of any sort are, whether we call them transaction costs or not, in order to clarify our discussion, since obviously a zero-transaction cost world in the sense I am using the term is too imaginary for useful analysis. But it also may be the case that technology could lower some transaction costs so substantially that the traditional assumptions about the currency issuing business could no longer apply -- another reason to analyze each kind of cost explicitly, even if it forces us into less formal territory.

10:15 PM

Devin Finbarr said...

Rather than view SzaboNotes or FinbarrNotes as proprietary bank notes, I'm going to change my language to view them as standards. So imagine two competing standards. The Szabo standard is a defined commodity basket currency. The definition was original created by the Szabo Bank, but now many other banks offer notes with the exact same basket. Opposing the Szabo Standard is the gold standard. It was originally championed by the Finbarr Bank. Again, the question is: does one of these standards outcompete the other?

For transactions costs, my assumptions are that they will be as low as humanly possible. Here are the assumptions:

1) No transactions cost for converting between assets. My debit card can be hooked up to an online investment account and I can buy sneakers priced in platinum with my all-stock investment account.

2) No mental tranasction costs. My web brower or iPhone automatically converts currency for me.

3) No political transaction costs. The enlightened governments of the remant empire adopt laize faire attitudes towards trade in order to stimulate growth.

4) Possible significant entpreneurial risk in the stocks and bonds. Information about these risks are as known as humanly possible.

5) Possible bubble risk. There will still be the risk of flucuating collectible premiums between goods. We have to allow this, otherwise we assume what we are trying to discover. That means bank run risk does exist (a bank run is simply a case of a sharply falling collectible premium on bank notes). "Liquidity" risk also exists (in the modern Orwellian sense of the word "liquidity" in which "illiquidity" means a discontinuous change in the collectible premium of an asset.)

5:49 PM

Devin Finbarr said...

(continued)

6) No super natural abilities to predict future mineral discoveries or technological innovations. Thus it will not be possible to perfectly predict how supply or direct demand of various assets will change in the future.

Also, under the zero transaction cost assumption the fact that contracts are denominated in your currency doesn't give you any lock-

in advantage, as it's costless to exchange currencies and to translate book entries from one currency to another for accounting purposes.

Again, let me rephrase to talk in terms of standards, rather than propietary currencies. If contracts all get denominated in terms of gold, then that will absolutely generate a sustained collectible premium for gold. There will be demand for gold to fulfill the contracts.

If there was no collectible premium gold would be cheap enough for a cartel to effectively corner the market. If it did, it would end up owning pretty much the entire world (all mortgaged real estate, all companies with debt denominated in gold etc). Thus the act of denominating in contract with gold at the bubble price level helps stablize the price at that level. This is why money is indeed the bubble that never pops.

If SzaboBank tries to break the gold standard lock in by promoting its own standard, it will have a very tough time. As it promotes the standard, it will cause a relative fall in the gold collectible premium and a relative rise in the collectible premium of the goods in the Szabo basket (the two collectible premiums are simply the inverse of each other). But as that happens, potential currency switchers will endure the risk of having the collectible premium of gold revert back to its original level. Since switchers incur bubble risk, but gain no economic advantage of the Szabo basket (except perhaps some diversification, but this is not really an issue since their long term investments will probably already be diversified). Thus the rational buyer will just stick with the herd and the gold standard.

All other times, people hold their standard investment portfolio and (since transaction costs are zero) get SzaboBucks only in the instant they are needed to complete a payment.

Under my assumptions we have not eliminated bubble risk nor entrepreneurial risk. People will hold notes replicating the Szabo standard because they have obligations denominated in the Szabo standard. While they could hold all their assets in investment accounts and exchange the assets instantly at the time of the transaction, this incurs risk. In some situations, any bubble risk or entrepreneurial risk is unacceptable. For instance, if I have a mortgage denominated in the Szabo standard, I might want at least a few months payments actually in Szabo standard notes. If I have my assets in equities there is the risk that temporary market flucuations could leave me unable to make my payments. A business may need a buffer, or temporary market flucuations could leave it unable to meet payroll.

So overall, I stick with my conclusions above. There will still be a collectible premium in a situation where transaction costs are as low as humanly possible. One standard will win over the market completely, because of the lock in provided by long term contracts. That standard could be a gold standard or it could be a basket standard comprising goods with gold-like stock to flow ratios.

5:50 PM

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